 <b>Good Display</b>	LCD MODULE SPECIFICATIONS	SPEC NO	
	GD56AUL	REV NO	1.03

# Good Display Specifications

Type: Standard  
Model No. GD56AUL  
Description:

- 5.6", 320 x RGB x 234dots, TFT LCD module.
- With white LED backlight
- VIDEO input.

Prepared: Xiaoli Lan  
Checked: Moon Wu  
Approved: Boris Jen  
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**Good Display**

**Dalian Good Display Co., Ltd.**

No.17 Gonghua Street, Shahekou District, Dalian 116021 China  
Tel: +86-411-84619565 Fax: +86-411-84619585  
E-mail: [sales@good-lcd.com.cn](mailto:sales@good-lcd.com.cn)  
Website: [www.good-lcd.com](http://www.good-lcd.com)  
[www.good-lcd.com.cn](http://www.good-lcd.com.cn)

Dalian Good Display Co., Ltd.



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## Version

Date	Version	Content
2007-3-23	VER: 1.00	The first
2007-5-13	VER: 1.01	The second
2007-6-2	VER: 1.03	The third



## 1. Profile :

GD56AUL TFT LCD module is composed of GD56AUL driver board and GTT056KDH01 panel. It provides users with VIDEO signal , with PAL and NTSC system format(auto switch). It adopt IC to control power supply and backlight(LED backlight).

## 2. Application :

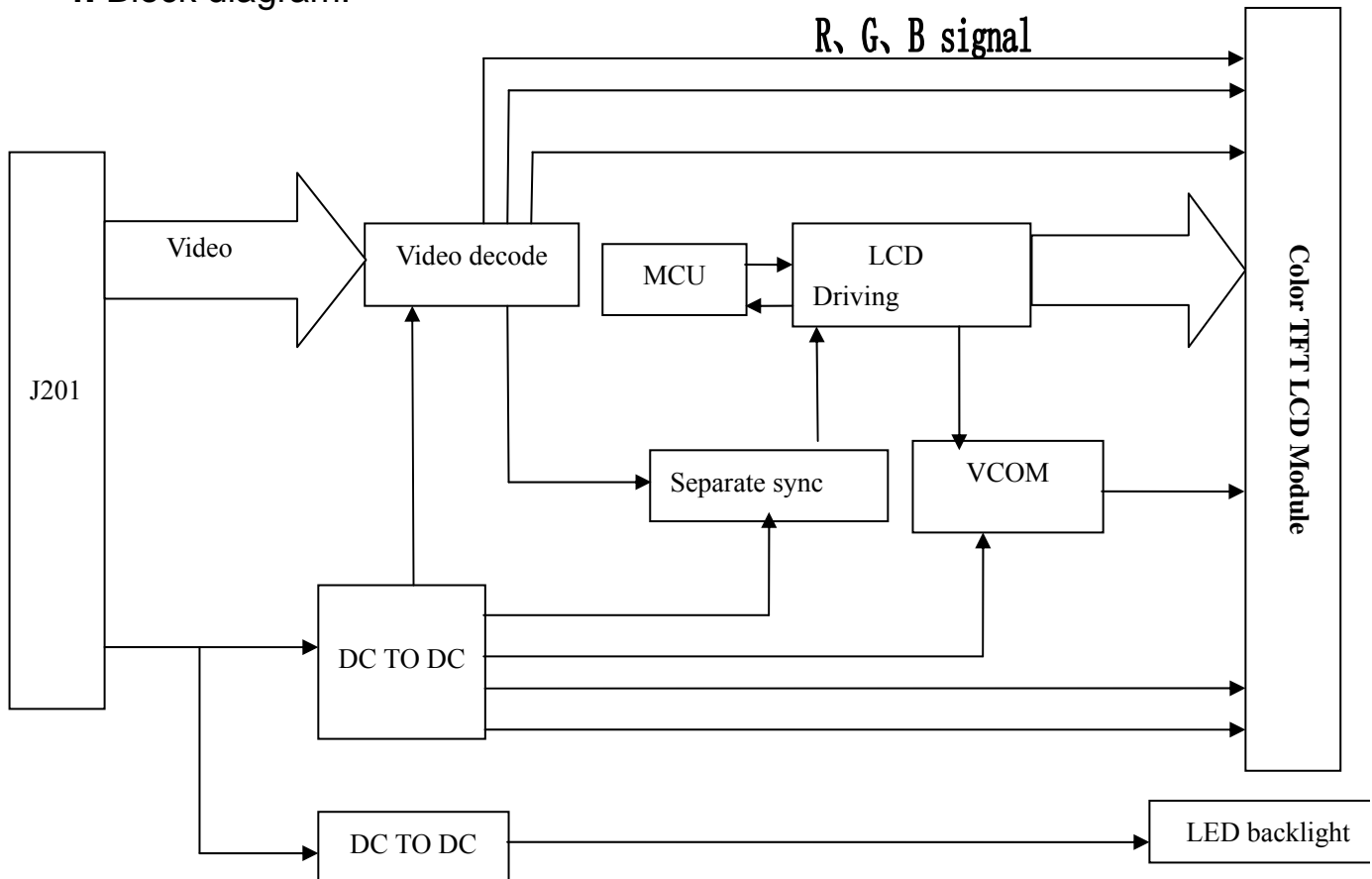
- Office Electric Equipment
- Instrument and Measure Equipment
- Machinery equipment
- Seeing and hearing equipment ( Car display、 Handy DVD、 Long-distance terminal and LCD TV )
- Family article for use ( Seeing Doorbell, Seeing phone and digital camera )
- Don't apply to high technology product that need dependable, stability and accuracy.

## 3. Main Parameter :

- Product Name : 5.6"TFT-LCD Module
- Model : GD56AUL
- Display : 5.6" T F T p n a e l
- Back light : LED
- Pixel : 320×3(RGB)×234
- Vision bound: ( U/D/L/R ) : ( 45/65/65/65 )
- Brightness : >250 cd/m<sup>2</sup>(put FPC line get off, you just lighten backlight when test it.)
- System format : PAL/NTSC(Auto switch)
- Signal input : 1.0Vp-p 75 ohm
- Voltage input : DC 12V±25% (12V 230mA±20mA)
- Dimension of LCD (mm) : 113.28 ( W ) ×84.708 ( H )
- Overall dimension of display (mm) : 126.5 ( W ) ×100 ( H ) ×5.7 ( D )
- Structural dimension of PCB (mm) : 102.2(W)×82.4 ( H ) ×8.15 ( D )
- Work temperature : - 3 0~ 8 5
- Relative humidity : 5~95% RH
- Storage humidity : - 30 ~+ 8 5



## 4. Block diagram:



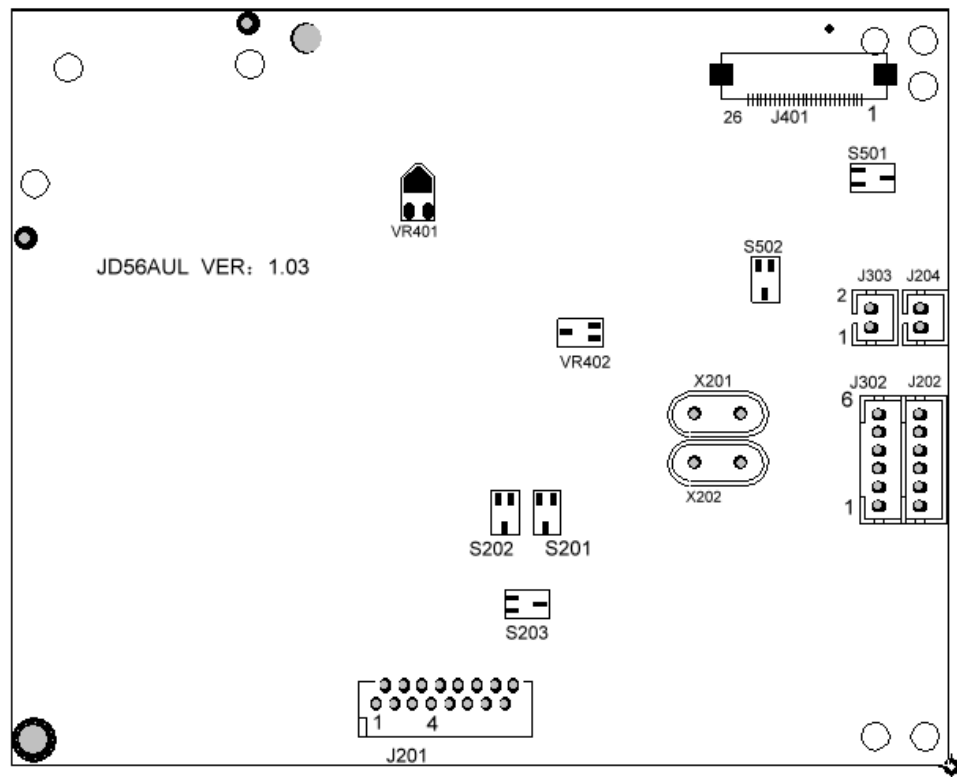
## GD56AUL Module Picture :





## 5. Wiring Diagram :

GD56AUL wiring diagram:



## 6. Connector Definition for Driver Board :

### 6.1 J302 Connector Definition:

Pin no.	Symbol	In/Out	Description	Remark
1	COL-	I	Color reduce	
2	COL	I	Color	R:1
3	COL+	I	Color plus	
4	BRI-	I	Brightness reduce	
5	BRI	I	Brightness	R:2
6	BRI+	I	Brightness plus	

[Note1] It's thick when the voltage is high, and thin when the voltage is low.

[Note2] It's light when the voltage is high, and dark when the voltage is low.



## 6.2 J201 Connector definition:

No.	Symbol	I/O	J201Pin description	Remark
1,2	+Vin	I	+12v power input	
3,4	GND	-	Power ground	
5	GNDS	-	Video signal ground	
6	CONT	I	Contrast Input	
7	VIDEO	I	Composite video signal input	
8	BRI	I	Brightness control voltage input	
9	COL	I	Color control voltage input	
10	L/R	I	Picture left/right inverse control	Note1
11	TINT	I	Tint control voltage input	
12	-HSY	O	Horizontal Sync Signal Input	
13	-VSY	O	Vertical Sync Signal Input	
14	Rin	I	Red Video Signal Input	
15	Gin	I	Green Video Signal Input	
16	Bin	I	Blue Video Signal Input	

[Note] Usually use 4pin to 1、3、5、7 feet.

## 6.3 J401 Connector definition:

Pin No.	Symbol	I/O	Function	Remar
1	GND	P	Ground	
2	VCC	P	Supply voltage for logic control circuit scan driver	
3	VGL	P	Negative power for scan driver	
4	VGH	P	Positive power for scan driver	
5	STVD	I/O	Vertical start pulse	
6	STVU	I/O	Vertical start pulse	
7	CKV	I	Shift clock input for scan driver	



## LCD Module User Manual

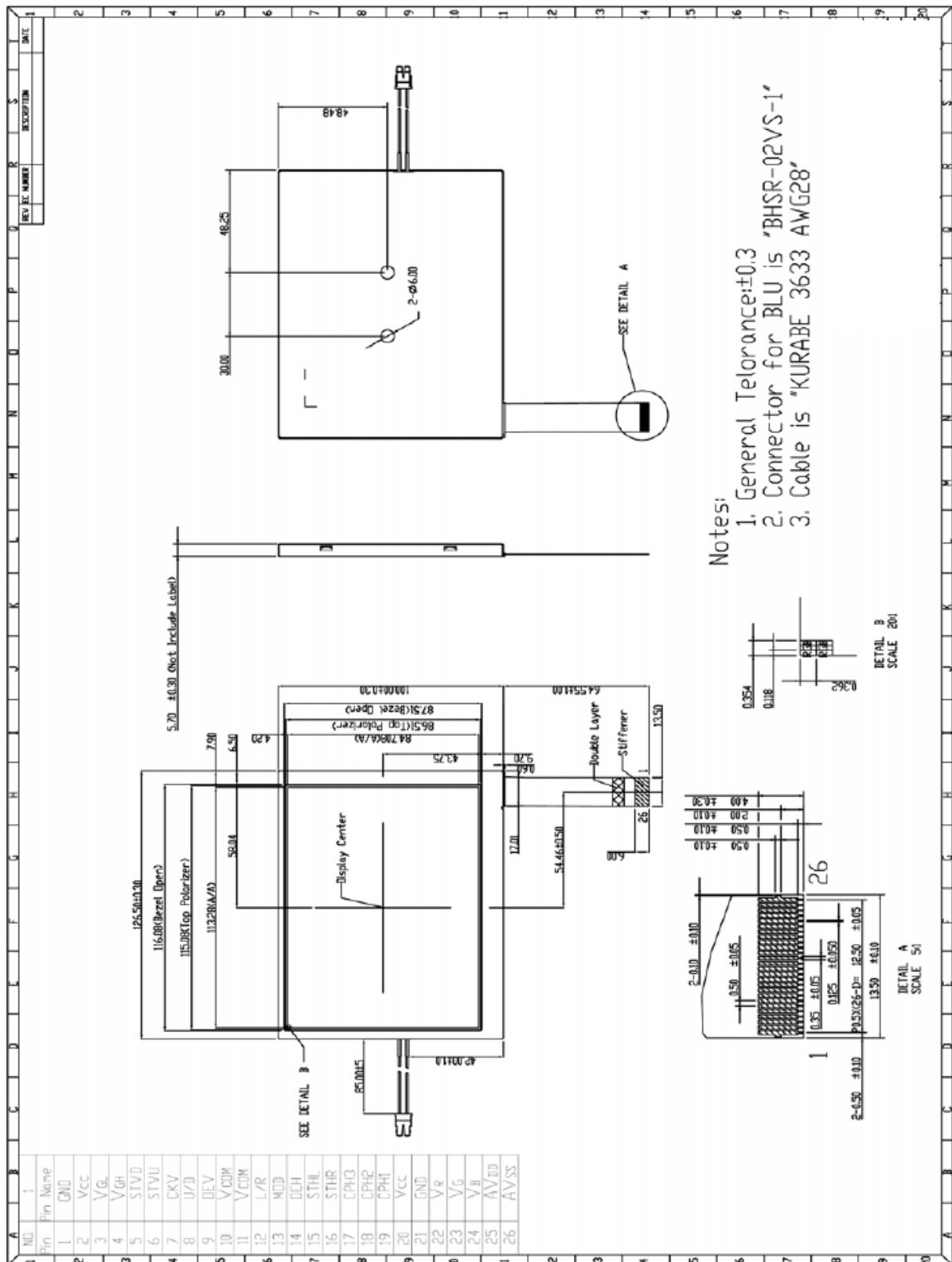
8	U/D	I	UP/DOWN scan control input	
9	OE <sub>V</sub>	I	Output enable control for scan driver	
10	V <sub>COM</sub>	I	Common electrode driving signal	
11	V <sub>COM</sub>	I	Common electrode driving signal	
12	L/R	I	LEFT/RIGHT scan control input	
13	MOD	I	Sequential sampling and simultaneous sampling setting	
14	OE <sub>H</sub>	I	Output enable control for data driver	
15	ST <sub>HL</sub>	I/O	Start pulse for horizontal scan line	
16	ST <sub>HR</sub>	I/O	Start pulse for horizontal scan line	
17	CP <sub>H3</sub>	I	Sampling and shifting clock pulse for data driver	
18	CP <sub>H2</sub>	I	Sampling and shifting clock pulse for data driver	
19	CP <sub>H1</sub>	I	Sampling and shifting clock pulse for data driver	
20	V <sub>CC</sub>	P	Supply voltage for logic control circuit scan driver	
21	GND	P	Ground	
22	VR	I	Alternated video signal(Red)	
23	VG	I	Alternated video signal(Green)	
24	VB	I	Alternated video signal(Blue)	
25	AV <sub>DD</sub>	P	Supply voltage for analog circuit	
26	AV <sub>SS</sub>	P	Ground for analog circuit	





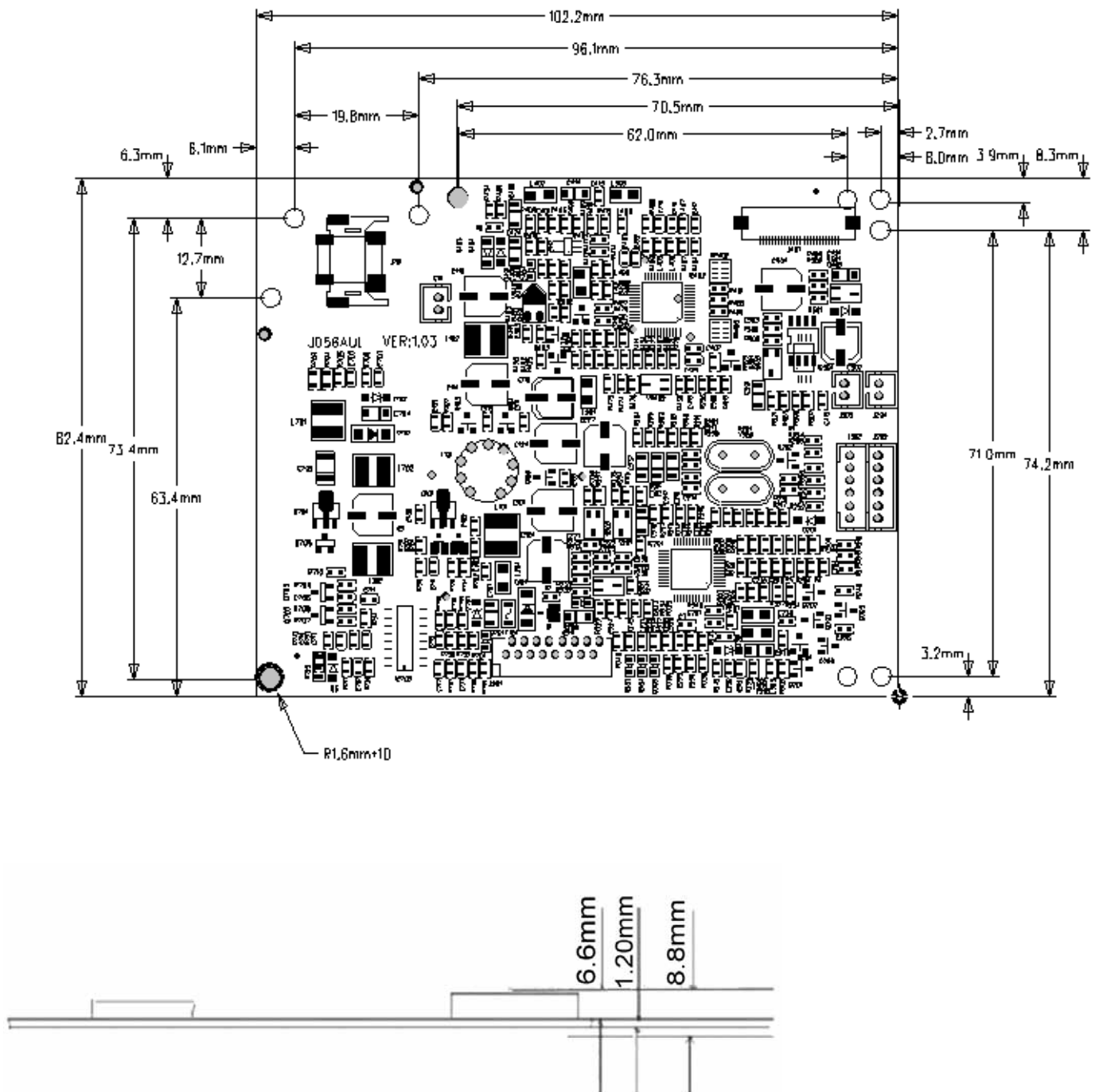
## 7. Structure Drawing :

### 7.1 LCD





## 7.2 PCB:





## 8. 5.6"TFT- LCD PANEL Inspection Standard:

Aim : Establishing the standard of PANLE for inspecting material & progress  
and for clients' inspection.

Scope : Apply to 5.6"TFT LCD

Content :

### 8.1. Inspection standard and method :

8.1.1. The method and determinant of inspecting the nick of panel of LCD :  
8.1.1.1. Inspect vertically (or at 45°angle from left/right)under the light tube (the power is 20 W) in the distance of 30cm to the panel. If there is no nick , it is "OK". Otherwise "NG".

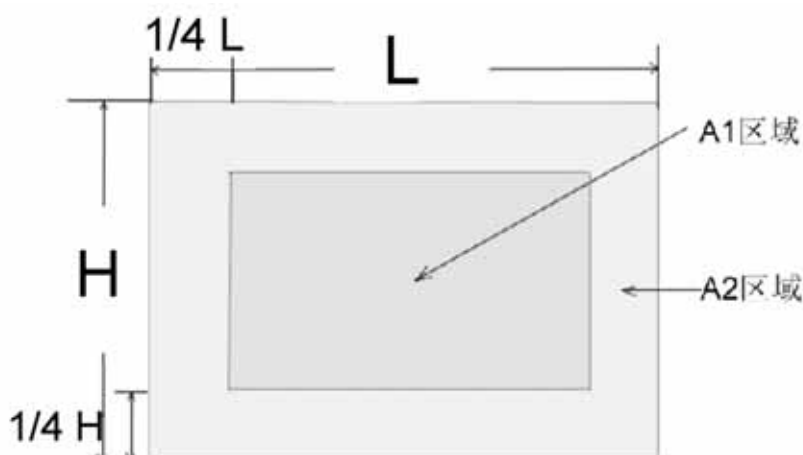
8.1.2. The method and determinative for black & white & color spots for the Panel of LCD :

#### 8.1.2.1. Inspection methods

8.1.2.1.1. Black spots : under status of denote light , set the MASK of black spot inspection near the black spot then compare the big and small by eyes.

8.1.2.1.2. White & Color spots: under status of denote light, set the Mask of black spot inspection on the white spot(or color spot) then inspect them by eyes if it can hide.

#### 8.1.2.2. Division of LCD Panel



Remark : A1 : The center of the available area for the picture



A2 :The edge of the available area for the picture( around the central area )

## 8.1.3. Determinant Choice

Spot Diameter ( mm )		Allowed Area	
		A1	A2
Black Spot	$d \leq 0.15$	Irrespective	Irrespective
	$0.15 < d \leq 0.3$	4	4
	$0.3 < d \leq 0.5$	2	3
	$0.5 < d \leq 0.8$	0	2
White or color spot	$d \leq 0.15$	Irrespective	Irrespective
	$0.15 < d \leq 0.3$	3	3
	$0.3 < d \leq 0.5$	1	2
	$0.5 < d \leq 0.8$	0	1

Remark: 1. Size: Average Diameter= ( Max. Diameter + Min. Diameter ) /2

2. Using information above as a standard in order to judge while the spot are dense.
3. Black & White spot : To judge the obvious spots through the change of voltage by comparison.
4. Total quantity of Black & white & color spot:  $A1 + A2 \leq 4$ .



### **9. Packing:**

**TBD**

### **10. Attention:**

1. The voltage of supply power don't exceed maxmium limit.
2. The connector can't connect board in reverse, or the board will be burnt and the products can't funtion well.
3. Please don't touch it in order to keep your skin non-burn when you electrify the board(there is high voltage on the board).
4. It is a electronic product, so you need to take anti-static measure when you operate it.
5. 5.6”TFT-LCD panel is a glasswork, place carefully ,broken for fear.
6. The connection is “FPC”, which connect 5.6”TFT-LCD panel with PCB, Please operate it carefully in order to keep it well.
7. Don't touch the pin of "variable resistor" when you adjust "VR".